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Accession Number	00126097-201408000-00007.
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Title	Quality of blood pressure phenotype in the Nigerian Population Research on Environment Gene and Health. [Miscellaneous Article]
Source	Blood Pressure Monitoring. 19(4):220-225, August 2014.
Abstract	Objective: In the ongoing Nigerian Population Research on Environment Gene and Health (NIPREGH), we are applying standardized epidemiologic methods to determine cardiovascular phenotypes including blood pressure (BP) among adult Black Africans of Nigerian origin. We present the quality control of the conventionally measured BP. Participants and methods: BP observers were trained for 1 month on BP measurement at commencement of the project and were retrained for 2 weeks 4 months later. The observers measured BP five times consecutively on participants according to the existing guidelines using a mercury sphygmomanometer. Five criteria - the percentage of identical readings, end digit preference, number preference, odd BP readings and expected progressive reduction from the first to the fifth reading - were used to assess the quality of BP phenotype. Results: As of 20 November 2013, a total of 1600 (800 each of systolic and diastolic BP) readings obtained from 160 participants were available for analysis. A total of 175 (21.9%) systolic and 160 (20%) diastolic readings were identical. Three (0.002%) of the 1600 BP readings were odd and 433 (27.1%) ended on a 0 (expected 20%). Per month analysis of digit preference indicates that the observers had no significant preference for any digit for the fourth, fifth and sixth month of the study (P>0.05). Systolic BP decreased significantly from the first reading to the fifth reading (P for trend<0.05), whereas the diastolic BP showed a nonsignificant trend towards reduction (P for trend>0.05). Conclusion: Inclusion of the quality assurance procedures for BP measurement immediately from the commencement of NIPREGH and the repeated training for the BP observers yield a high quality BP phenotype.
Author Keywords	black Africans; blood pressure monitoring; mercury sphygmomanometer; quality control.
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Language	English.
Document Type	Clinical Methods and Pathophysiology.
Journal Subset	Clinical Medicine. Health Professions. Pharmacology.
ISSN	**1359-5237**
NLM Journal Code	9606438, dad
DOI Number	10.1097/MBP.0000000000000053

English

Version: OvidSP_UI03.13.01.101, SourceID 63482